What is claimed is:

1. A developing device comprising:

a developer-carrying member that conveys a charged nonmagnetic single-component developer to a surface of an image-carrying member;

a supplying member that supplies a developer to the developer-carrying member; and

a removing member that removes a charged nonmagnetic single-component developer remaining on a peripheral surface of the developer-carrying member that was not supplied to the image-carrying member, wherein

the developer-carrying member rotates in a rotational direction such that the peripheral surface of the developer-carrying member opposing the supplying member moves vertically downward; and

the removing member is positioned vertically above the supplying member and upstream of the supplying member in the rotational direction of the developer-carrying member.

2. The developing device according to claim 1, wherein the removing member rotates such that a peripheral surface of the removing member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the removing member while in contact with the peripheral surface of the developer-carrying member.

3. The developing device according to claim 1, wherein a bias is applied to between the removing member and the developer-carrying member so as to attract the charged nonmagnetic single-component developer from the peripheral surface of the developer-carrying member to the removing member, wherein the removing member is formed of a conductive material.

4. The developing device according to claim 1, wherein the removing member rotates and has a peripheral surface, and a velocity ratio of the peripheral surfaces of the removing member and the developer-carrying member is 0.7-1.3.

5. The developing device according to claim 1, wherein:

the supplying member rotates such that a peripheral surface of the supplying member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the supplying member;

a velocity ratio of the peripheral surfaces of the supplying member and the developer-carrying member is 0.7-1.3.

6. The developing device according to claim 5, wherein the supplying member is formed of a conductive material, and the supplying member and the developer-carrying member have the same potential.

7. The developing device according to claim 1, wherein:

the supplying member rotates such that a peripheral surface of the supplying member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the supplying member;

a velocity ratio of the peripheral surfaces of the supplying member and the developer-carrying member is 0.7-1.3;

the supplying member is formed of a conductive material;

the supplying member and the developer-carrying member have the same potential; and

a bias is applied to between the supplying member and the developer-carrying member so as to attract the charged nonmagnetic single-component developer from the supplying member to the developer-carrying member.

8. The developing device according to claim 1, further comprising a thickness-regulating member that is disposed downstream of the supplying member in the rotational direction of the developer-carrying member, the thickness-regulating member regulates a thickness of the charged-nonmagnetic single-component developer carried on the developer-carrying member.

9. A developing device comprising:

a developer-carrying member that conveys a charged nonmagnetic single-component developer to a surface of an image-carrying member;

a supplying member that supplies a developer to the developer-carrying member; and

a removing member that removes a nonmagnetic single-component developer remaining on a peripheral surface of the developer-carrying member that was not supplied to the image-carrying member, wherein

the removing member is positioned upstream of the supplying member in the rotational direction of the developer-carrying member;

the removing member rotates such that a peripheral surface of the removing member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the removing member while in contact with the peripheral surface of the developer-carrying member.

10. The developing device according to claim 9, wherein the removing member is formed of a conductive material, and a bias is applied to between the removing member and the developer-carrying member so as to attract the electrically-charged nonmagnetic single-component developer from the developer-carrying member to the removing

member.

11. The developing device according to claim 9, wherein a velocity ratio of the peripheral surfaces of the removing member and the developer-carrying member is 0.7-1.3.

12. The developing device according to claim 9, wherein the supplying member rotates such that a peripheral surface of the supplying member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the supplying member, and a velocity ratio of the peripheral surfaces of the supplying member and the developer-carrying member is 0.7-1.3.

13. The developing device according to claim 12, wherein the supplying member is formed of a conductive material, and the supplying member and the developer-carrying member have the same potential.

14. The developing device according to claim 9, wherein:

the supplying member rotates such that a peripheral surface of the supplying member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the supplying member;

a velocity ratio of the peripheral surfaces of the supplying member and the developer-carrying member is 0.7-

1.3;

the supplying member is formed of a conductive material;

the supplying member and the developer-carrying member have the same potential; and

a bias is applied to between the supplying member and the developer-carrying member so as to attract the electrically-charged nonmagnetic single-component developer from the supplying member to the developer-carrying member.

15. The developing device ac0cording to claim 9, further comprising a thickness-regulating member that is disposed downstream of the supplying member in the rotational direction of the developer-carrying member, the thickness-regulating member regulating a thickness of a developer carried on the developer-carrying member.

16. An image forming apparatus, comprising:

an image-carrying member;

a developer-carrying member that conveys a charged nonmagnetic single-component developer to a surface of the image-carrying member;

a supplying member, formed of a conductive material, that supplies a developer to the developer-carrying member;

a removing member, formed of a conductive material, that removes a charged nonmagnetic single-component developer remaining on a peripheral surface of the

developer-carrying member that was not supplied to the image-carrying member; and

a power source; wherein

the developer-carrying member rotates in a rotational direction such that the peripheral surface of the developer-carrying member opposing the supplying member moves vertically downward;

the removing member is positioned vertically above the supplying member and upstream of the supplying member in the rotational direction of the developer-carrying member;

a bias is applied by the power source to between the removing member and the developer-carrying member so as to attract the charged nonmagnetic single-component developer from the peripheral surface of the developer-carrying member to the removing member, and

a bias is applied by the power source to between the supplying member and the developer-carrying member so as to attract the charged nonmagnetic single-component developer from the supplying member to the developer-carrying member.

17. An image forming apparatus, comprising:

an image-carrying member;

a developer-carrying member that conveys a charged nonmagnetic single-component developer to a surface of the image-carrying member;

a supplying member, formed of a conductive material,

that supplies a developer to the developer-carrying member;

a removing member, formed of a conductive material, that removes a nonmagnetic single-component developer remaining on a peripheral surface of the developer-carrying member that was not supplied to the image-carrying member; and

a power source, wherein

the removing member is positioned upstream of the supplying member in the rotational direction of the developer-carrying member;

the removing member rotates such that a peripheral surface of the removing member opposing the developer-carrying member moves in the same direction as the peripheral surface of the developer-carrying member opposing the removing member while in contact with the peripheral surface of the developer-carrying member;

the power source applies a bias to between the removing member and the developer-carrying member so as to attract the electrically-charged nonmagnetic single-component developer from the developer-carrying member to the removing member; and

the power source applies a bias to between the supplying member and the developer-carrying member so as to attract the electrically-charged nonmagnetic single-component developer from the supplying member to the

developer-carrying member.